



National Park Service
U.S. Department of the Interior
Channel Islands National Park

The Nature Conservancy
Santa Cruz Island
California



Santa Cruz Island—An Ecosystem Threatened

Introduced species and human disturbances have taken their toll on Santa Cruz Island. Today, 10 species of rare plants and animals—including the diminutive Santa Cruz Island fox—hover on the edge of extinction.

Biologists have traced the origins of this alarming decline to the impacts caused by feral animals. In the mid 1800s, European settlers imported domestic farm animals to the island. Though only small numbers of sheep and pigs may have escaped their pens during this era, they went on to form huge feral populations that have thrived over the course of 150 years.

When The Nature Conservancy acquired an interest in Santa Cruz Island in 1978, it was with the intent to restore the island's natural ecological balance. Tens of thousands of roving feral sheep and pigs had reduced much of the island's native vegetation to stubble or bedrock. Widespread erosion led to massive landslides. Many species, such as the Santa Cruz Island monkeyflower, had already disappeared.

By the early 1960s, a native bird—the bald eagle—was also gone, poisoned by DDT, which was manufactured in Southern California for many years before it was banned in 1972. The pesticide had contaminated the bird's marine-based food supply, rendering its eggs too thin to hatch.

Following extensive scientific study of Santa Cruz Island's fragile ecosystem, The Nature Conservancy and the National Park Service removed thousands of feral sheep from the island. The sheep's absence allowed native flora to stage a dramatic comeback during the 1990s. Whole forests of bishop pine returned; the rare Santa Cruz Island lotus crept back over the cliff edge where it had retreated from the sheep, and fields of blue dicks, goldfields, and purple needlegrass flourished once again.

Still, all is not well on Santa Cruz Island.

Thousands of feral pigs remain, rooting up soil that causes substantial erosion, threatening native Chumash archeological sites and facilitating the spread of fennel, an invasive weed which quickly grows in tall, thick stands that choke out native plants. As a result of the pigs' destructive behavior, nine species of plants and the island fox struggle for survival; all occupy spots on the federal threatened/endangered species list.

Furthermore, the pigs have attracted a new top predator to the island—golden eagles. Considered only occasional visitors to the island when territorial bald eagles ruled the roost, golden eagles discovered an abundant food source in the feral pigs in the 1990s and began colonizing Santa Cruz Island. In addition to preying upon feral pigs, golden eagles also preyed upon the island fox. In less than a decade, these raptors had reduced the island fox population by over 90 percent.

What's at Stake

Without intervention, the island fox will perish. One-of-a-kind plant species will disappear. The island's native ecosystem is imperiled. Indeed, there is urgency to our efforts:

- **Island foxes** are uniquely adapted, miniature foxes found only on California's Channel Islands. For thousands of years, these diminutive relatives of the gray fox were the island's top predator. In the 1990s, golden eagles began nesting on the island and preying on the native foxes. In the past 10 years, island fox populations have plummeted, declining by over 90 percent of historic numbers on three of the northern Channel Islands. In March 2004, island foxes were added to the federal endangered species list.
- **Nine species of plants and wildflowers** found only on the islands are listed as threatened or endangered, and are sliding toward extinction.
- **Unparalleled archaeological resources** are the reason that 90 percent of Santa Cruz Island is listed in the National Register as a "Registered Archaeological District." Feral pigs are digging up and destroying the island's 11 Native American village sites and other unique cultural resources.
- **Soils and water quality** are being damaged across the island. Extensive rooting by feral pigs causes soil erosion and transports sediments into water courses and out to the sea. Rooting also provides opportunities for invasion of aggressive weeds, which choke out native plants and eliminate habitat for native wildlife.

Feral pigs and other invasive species threaten the survival of 10 rare species (nine plants and one mammal) on Santa Cruz Island. They are all federally listed as threatened or endangered.

*Santa Cruz Island Fox
*Santa Cruz Island Live- forever
*Santa Cruz Island Bush Mallow
*Santa Cruz Island Lacepod
Santa Cruz Island Malacothrix
Hoffman's Rockcress
Island Barberry
Island Bedstraw
Island Rush Rose
Island Malacothrix

**Found only on Santa Cruz Island*